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Planning and Standards
Research Triangle Park, NC 27711

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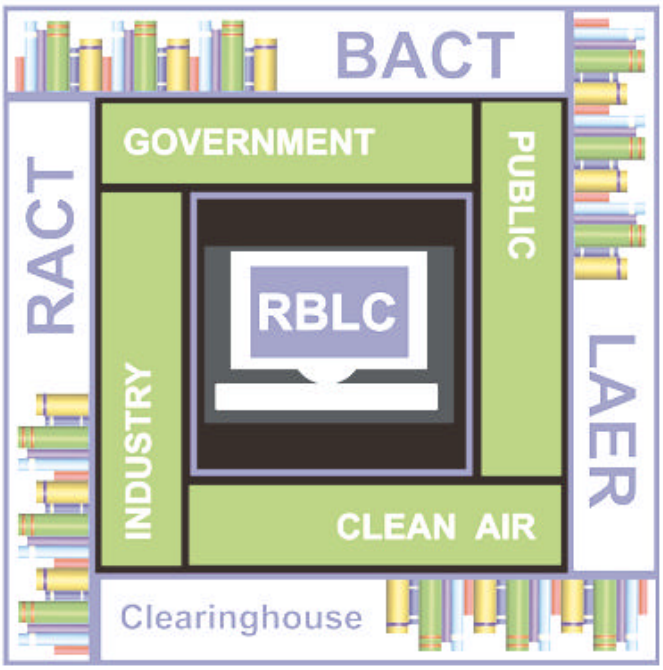
Air

USER'S MANUAL FOR THE RACT/BACT/LAER CLEARINGHOUSE (RBLC) WEB

Volume 2 - Data Entry



Developed as Part of a Joint Effort Between the
U.S. Environmental Protection Agency's
Clean Air Technology Center (CATC) and
State and Local Air Pollution Control Agencies

USER'S MANUAL FOR THE RACT/BACT/LAER CLEARINGHOUSE (RBLC) WEB

CLEAN AIR TECHNOLOGY CENTER

SPONSORED BY:

Information Transfer Group
Office of Air Quality Planning and Standards
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PREFACE

This user's manual was prepared for and funded by the New Source Review RACT/BACT/LAER Clearinghouse (RBLC),[1] U.S. Environmental Protection Agency (EPA). The RBLC has been established and is maintained by the Clean Air Technology Center (CATC) to assist State and local air pollution control personnel in making control technology determinations and in sharing technology information.

The RBLC provides data on prevention and control technology determinations made primarily by State and local permitting agencies. The Clearinghouse contains over 4,000 determinations that can help the user to identify appropriate technologies to mitigate or treat most air pollutant emission streams. The RBLC was designed to help permit applicants and reviewers make pollution prevention and control technology decisions for stationary air pollution sources and includes data submitted by 50 states and territories in the U.S. on over 200 different air pollutants and 1,000 industrial processes.

The Clearinghouse also has a rule data base that summarizes all emission standards issued by EPA's Office of Air Quality Planning and Standards (OAQPS). This includes New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT) standards. The rule data base also includes prevention and control technology cost information related to each rule and references to supporting documentation.

Read the section, *Quick Start Instructions for the RBLC Data Base*, in this document to begin using the RBLC Web.

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[1] NOTE: RACT, BACT and LAER are acronyms for different Clean Air Act program requirements combined to create the name "RACT/BACT/ LAER Clearinghouse." RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards (i.e., non-attainment areas). BACT, or Best Available Control Technology, is required on major new or modified sources in "clean" areas (i.e., attainment areas). LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas. However, data in the Clearinghouse is not limited just to sources subject to these requirements. Noteworthy prevention and control technology decisions are included in the RBLC even if they are not related to RACT, BACT, or LAER decisions.

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DATA ENTRY OVERVIEW

4.1 ACCESS

Online editing of the RBLC permit database is available to authorized users from State and local agencies across the United States. Contact the RBLC Webmaster to request authorization to add and update information.[2] Authorized users can add and edit determinations and contact information for their agency and state.

New determinations are entered first into the Transient/Early Notification data base and move through the following stages: In Process, Ready for Quality Assurance (QA), then QA Complete. EPA promotes determinations to the current RBLC data base. Authorized users can edit completed determinations by copying the determination into the Transient/Early Notification data base. The determination will take the same route through QA and EPA review before promotion into the current data base. Please note that the original (promoted) determination will remain available until the revised determination is promoted. The revised determination will then replace the original entry. Once the revised determination has been promoted, the old version of the same determination will no longer be available.

4.2 ON-LINE HELP OPTIONS

Like other portions of the RBLC Web, the on-line HELP reference is available for data fields throughout the system (see Section 1.2.2 in Volume I of this User's Manual for more information). The entire HELP system, with a table of contents, is available by clicking the RBLC Help link at the bottom of each data entry page. Future additions to the system will include an on-line context sensitive HELP function for data entry fields throughout the system. When installed, this function will allow the user to click on the Help icon nearest to the data entry field in question to access a HELP file for that field.

4.3 NAVIGATING DATA ENTRY

Within the data entry portion of the RBLC Web site, users can choose from the following options:

- **Add New Determination**: create a new data base entry to the transient data base.
- **Edit In-Process Determination**: edit an existing transient database entry.

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[2] The RBLC Webmaster is Joe Steigerwald, email: Steigerwald.Joe@epamail.epa.gov; Telephone: (919) 541-2736. See also Volume I, Section 1.1.4 of this User's Manual.

- **Edit Completed Determination**: move a determination from the current data base to the transient data base for editing (using the Edit In-Process Determination option).
- **Add/Edit Contact Information**: add or edit agency contact information.
- **Exit Data Entry**: log out from the data entry system.

Please note: each data entry screen must be saved using either the SAVE and EXIT, SAVE AND CONTINUE, or UPDATE buttons. Using the web browser buttons to move forward or back will not save the data that has been entered.

The RBLC data entry page includes a logout button (Exit Data Entry). For security reasons, users should log out after every data entry session. The system will prompt the user to log in again if a session is inactive for longer than 20 minutes. Clicking the OK button at the prompt will allow the user to log in and continue with the session. Data entered previously can then be saved. Clicking the Cancel button at the prompt, however, will return the user to the initial data entry log in screen. Data entered previously will **not** be saved. Although previously accessed data entry screens can be viewed after logging off by using the web browser Back button, the system will not save data entered without an authorized log in.

Adding and editing determinations is done using on-line forms. Buttons at the top and bottom of each form allow the user to navigate, save, and update data. Many of the data fields use drop-down lists that facilitate entry of correctly formatted entries.

4.4 PLANNING AND PREPARATION

Agencies may wish to define procedures and quality standards for entry of determination data to the RBLC, as incomplete or incorrect data can result in repeated calls to the agency for more information, misunderstandings about the data with industries or the public, and other inefficient uses of staff time and effort. In some cases, appointing one person to coordinate a large data entry effort and to be the EPA contact point may be a logical approach. In other cases, defining specific procedures and tracking the progress of entries may be more than adequate. In all cases, quality assurance and quality control (QA/QC) standards should be maintained. See Section 4.5 for a suggested QA/QC checklist.

Data entry and edits can be done most efficiently when the RBLC web data requirements and data fields are understood and permit information has been organized before beginning entry. It is recommended that permit information be organized before entry, so that all of the required information (e.g., codes, units, and abbreviations) will be on hand during data entry.

Refer to Section 4.5 of this document for:

- Descriptions of data fields;

- Required data fields, units, and formats; and
- Data organization tips.

Keep in mind that permit information needs to be entered in such a way that the data base search routines will be able to find it when it is relevant. Take the time to accurately match RBLC process type codes and Source Classification Codes (SCCs) to the processes, and to describe control devices or pollution prevention technology. The RBLC Documents page, accessed from the RBLC Web Main page, contains text and data base files containing the Source Industrial Classification (SIC) Codes and the SCCs needed to accurately categorize facilities and processes.[3] Identify processes and pollutants for which standard emission limits are required (see Appendix E for a list).

At a more general level, identify the information needed to enter a complete determination. A determination must have information at the facility, process, and pollutant levels. Identify all likely pollutants for a process and be prepared to address them all, either as pollutant entries or explanatory notes in the process entry. Identify situations where a single process or piece of equipment may need to be entered as multiple process entries or several processes may need to be combined (see the examples below). When questions arise about how to enter non-standard situations, please contact the RBLC Webmaster.

EXAMPLE - ONE PROCESS, MANY EMISSION LIMITS

Problem: Separate emission limits for NO_x emissions have been set for multiple operation scenarios for turbines at a power plant. There are six operation scenarios based on three different fuel options and whether the turbines operate as simple or combined cycle. Emission limits for other pollutants are the same regardless of the scenario.

Solution: Enter the scenarios as six separate processes (process type codes and SCCs change for each scenario), and enter the NO_x emissions limits for each. Create a seventh process for the generic process (mixed fuels, and simple or combined cycles undefined), and enter the remaining pollutant limits under the seventh process. Document and explain this approach in the facility and process notes.

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[3] The U.S Census Bureau maintains a Web site which cross references SIC codes with the North American Industry Classification System (NAICS) of industrial codes: http://www.census.gov/epcd/www/naics.html. The EPA's Emission Factor and Inventory Group maintains the list of SCCs and any updates of those codes can be found at: http://www.epa.gov/ttn/chief/codes/index.html.

EXAMPLE - MANY IDENTICAL PROCESSES, ONE SET OF EMISSION LIMITS

Problem: Eight identical natural gas fueled turbines, vented through a single stack, are permitted together with identical emission limits. Emission limits are expressed in units of pounds per hour for each turbine, and parts per million exiting from the stack. How should the turbines' emission limits be entered in the RBLC?

Solution: Enter all eight turbines as a single process. Specify in the process notes the number of turbines and whether the throughput is the combined throughput or throughput for each turbine. Enter the emission limits, remembering to enter the parts per million emission limit in the standard emission limit fields. Specify in the notes field that the pounds per hour emission limit is for each

4.5 DATA FIELDS AND FORMATS

For a determination to be considered complete and eligible for promotion to the permanent RBLC data base, certain data fields must be entered, and required data formats must be observed. Data for most of the searchable fields must be entered before a screen can be saved. In the on-line data entry forms, the required fields are marked with a diamond (—).

Use Table 4.1 to identify required and recommended data fields. These requirements help insure that searches will be productive and that the data base contains information that is helpful to most users. Data elements marked as recommended fields are those that may be required under future NSR regulations. Collecting and entering these data will improve the quality and usefulness of the data base.

Refer to Appendix A and the on-line documentation for instructions for entries to each data field. As discussed previously, planning and organizing the data beforehand will make the data entry process more efficient. Figure 4-1 is a suggested QA/QC checklist for entries.

After a determination has been entered into the system, EPA will review the entry, follow up with the agency if necessary, and then promote the completed entry to the permanent RBLC data base.

TABLE 4.1
NAMES AND CHARACTERISTICS OF RBLC DATA FIELDS

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
FACILITY LEVEL INFORMATION			
RBLC ID	Required	Y	Assigned by the system. Unique to each determination.
Plant/Company name	Required	Y	Name of the facility, include the name of the company that owns the facility, if is different.
Plant contact name	Recommended	N	
Plant contact's street address	Recommended	N	Plant Contact's mailing address, may not be facility address. Zip codes can be found at: http://www.usps.gov/ncsc/lookups/lookups.htm.
Plant contact's city, state and zip code	Recommended	N	
Plant contact's telephone/fax	Recommended	N	
Plant contact's email address	Recommended	N	
Plant location - UTM coordinates	Recommended	N	Actual plant location
Plant location - County	Not required	N	
Plant location - State	Required	Y	Assigned by the system.
EPA Region	Required	Y	Assigned by the system.
Agency Code and Name	Required	Y	Choose from a drop-down list.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Agency Contact and Telephone Number	Required	N	Choose from a drop-down list.
Public Hearing	Not Required	N	
New/Modified Source	Required	N	
Permit Number	Required	Y	
AIRS Facility Number (universal Plant ID)	Recommended	Y	
SIC Code	Required	Y	Drop down list; complete list in RBLC Documents section.
Application Received	Recommended	N	
Permit Issue Date	Required	Y	Must be actual date in order for the determination to be promoted to the current data base.
Start-up Date	Recommended	N	
Compliance Verification Date	Recommended	N	
Facility Notes	Recommended	N	Notes allow the entry of non-standard information.
Affected Class 1 Areas	Recommended	Y	
Plant Narrative/Emission Sources/Fuel/Abatement Description	Recommended	N	

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Plantwide Emissions	Recommended	Y	
PROCESS LEVEL INFORMATION			
Process Description	Required	Y	
Process Type	Required	Y	Includes process type code, selected from a drop-down list. Also listed in Appendix D of this User's Manual.
Source Category Code (SCC)	Required	Y	A listing of SCCs can be found on the RLBC Documents page.
Primary Fuel	Recommended	N	For combustion units only
Throughput Capacity and Units	Not Required	N	If this information is CBI, it should **not** be entered.
Compliance Verification	Recommended	N	
Process Notes	Recommended	N	
POLLUTANT LEVEL INFORMATION			
Pollutant Name/Chemical Abstract Service (CAS) Number	Required	Y	Select pollutant name and CAS number from the drop-down list.
Control Method Code	Required	Y	
Control Method Description	Required*	Y	* A control method description is not required when there are no controls (control method code = N)

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Number of Control Options Considered	Not Required	N	
Rank of Option Selected	Not Required	N	
Primary Emission Limit	Required*	Y	*An emission limit is required for every pollutant entry. Three exceptions are allowed, although it is still recommended that you provide a primary emission limit. The exceptions are: 1) If no control is used, (control method code = N); 2) If a standardized emission limit is listed; or 3) If percent efficiency is substituted as a limit as part of the permit.
Primary Emission Limit Unit	Required	Y	An emission unit is required if a limit has been entered.
Alternate Emission Limit	Not Required	N	
Alternate Emission Limit Unit	Not Required	N	An emission unit is required if a limit has been entered.
Standardized Emission Limit	Required*	Y	* For all processes, the emission limit for visible emissions (VE as percent opacity) should be listed in the standardized emission limit field. A standardized emission limit is required for the pollutants listed under the process type codes in Appendix E, *RBLC Standard Emission Units by Process Type Code*. If the process type and pollutant is not listed in Appendix E, an emission limit is not required.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Standardized Emission Limit Unit	Required	Y	An emission unit is required if a limit has been entered.
Emission Limit Basis	Required	Y	
% Efficiency	Recommended	N	See note on primary emission limits above.
Emission Type	Required	Y	Options are: P (point), A (area), and F (fugitive).
Costs Verified by Agency	Recommended	N	
Capital Cost of Control Equipment	Not Required	N	If this information is CBI, it should **not** be entered.
O/M Cost of Control Equipment	Not Required	N	If this information is CBI, it should **not** be entered.
Year Used in Cost Estimates	Recommended	N	If this information is CBI, it should **not** be entered.
Annualized Cost	Not Required	N	In dollars
Cost Effectiveness	Recommended	N	In dollars per ton
Incremental Cost Effectiveness	Recommended		

QA/QC Checklist for Data Entry and Editing

For the Entire Determination

- Keep in mind the general goals of a QA review: insuring entry completeness, accuracy in data entry, coding, naming, and reasonableness.
- Throughout the determination entry, check for typographical errors and misspellings, even in the notes fields. Make sure that the notes are concise, well worded, and informative.
- Check for accuracy in data entry.
- Check all required and recommended data fields. Use Table 4.1 and Appendix A to identify those fields.

Facility Level Input Form

1) Are name, address and location data reasonable and correct? Include any entries for UTM coordinates in the checks. UTM coordinates are defined as zone, easting and northing (x and y coordinates, respectively). The conterminous 48 States are covered by 10 zones, from Zone 10 on the west coast through Zone 19 in New England. Alaska is covered by zones 10 through 2, and Hawaii by zones 4 and 5.

2) Check SIC codes. If you were looking for information about this type of facility, would you search using the code that has been assigned?

3) Is the permit issued date an actual or estimated date? It will need to be actual for the determination to be promoted. Is the permit issued date after the application received date? Actual start up and compliance dates are especially helpful to users of the data base because those dates indicate that the project is actually operating. These should be entered if they are available.

Process Level Input Form

4) Are all of the processes covered by the determination included? Are the processes defined so that pollutants, controls and limits can be entered in an understandable way for each one?

5) Check the process name. Does it use the standard naming approach for processes described in the data entry instructions in Appendix A, *RBLC Data Submittal Form and Instructions* (e.g., turbine, single cycle, natural gas)?

Figure 4-1: QA/QC Checklist

6) Check the SCC designations. If you were looking for this process, would you search using the code that you assigned?

7) Check the units for throughput. Use Appendix D to check units abbreviations.

8) If throughput is not in terms of fuel, is information provided about the throughput material in the notes?

9) Has compliance information been entered? If compliance has been verified using "other" methods, have these methods been specified under "describe other"?

Pollutant Level Input Form

10) Are all of the pollutants included for each process? In many cases, the permit addresses only one or a few of the pollutants that can be expected to be emitted from a process. If there are pollutants that are not included in the determination for a process, include an explanation in the process notes.

11) Is the Control Method Code properly assigned? Remember that a device added to a process that reduces emissions during the process (e.g., low-NO_x burners) should be defined as pollution prevention, not as an add-on. Pollution prevention encompasses recycling, materials changes and reformulation, and pollution reduction technology that is integral to the process.

12) If the control method code is add on, pollution prevention or both (add on and pollution prevention), there must be a description of the control method in the text field.

13) Check the descriptors for add on control devices and pollution prevention methods. Use the names and abbreviations in Appendix D, *RBLC Process, Unit, and Pollutant Abbreviations* to insure that consistent terms are used throughout the data base.

14) Have emission limits been entered? Limits can be entered as either emissions or as a control's percent efficiency. If the only limit is the percent efficiency, the efficiency should be entered in the primary emission limit field and in the percent efficiency field.

15) Are pollutant emission limits, and percent efficiency levels reasonable?

Figure 4.1: QA/QC Checklist, continued.

16) Check units for primary and alternate emission limits. Use Appendix D to check abbreviations for emission units.

17) Emission limits for visible emissions (VE) should be expressed as percent opacity (% opacity). VE emission limits for all processes should be entered in the standard emission limit field.

18) Check the processes in the determination against the list of processes included in Appendix E, *RBLC Standard Emission Units by Process Type Code*. If a process matches any of those on that list, there should be a standard emission limit entered for the pollutants listed for that process.

Figure 4.1: QA/QC Checklist, continued.

SECTION 5
RBLC WEB PERMIT DATA ENTRY AND EDITING PROCEDURES

Access and authorization to enter and edit data in the RBLC Web is discussed in Section 4.1 of this volume. Navigation while using the data entry and editing options on the RBLC Web is described in Section 4.3. The following sections describe the procedures available to enter and edit determinations on the RBLC Web and to submit data on paper forms or as computer files. The section titles for RBLC Web functions are same as the Data Entry Menu Web buttons that they describe.

When using the RBLC Web data entry and editing procedures, new determinations are entered first into the Transient/Early Notification data base and move through the following stages: In Process, Ready for Quality Assurance (QA), then QA Complete. Flags to mark the determination's status are available on a pull-down list at the top of the facility edit page, and are discussed in more detail in Section 5.2 of this volume. EPA promotes determinations to the current RBLC data base.

5.1 ADD A NEW DETERMINATION

The Add a New Determination button on the Data Entry Menu is for creating a new determination listing in the RBLC data base. When a user has multiple-state data entry privileges, the first screen of this sequence will ask the user to identify the state where the determination is located. If a user has single-state data entry privileges, the first screen will be the facility level entry form. The system will assign a facility number (an internal tracking number) and an RBLC ID. See Section 2.2 of this User's Manual for more information about RBLC IDs.

The Add a New Determination option will guide the user through each level of data that should be entered (i.e., facility, process, and pollutant) using the Save and Continue button at the bottom of each entry form. The data entry forms and navigation buttons available are:

- Facility form
  - Main Menu/Abort Changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page. Using the Main Menu button without saving the newly entered data will result in the data being lost.
  - Save & Exit - Saves the data in the form, exits from the Add option.
  - Save & Continue - Saves the data in the form, continues to the Process form.

- Process form
  - Main Menu/Abort Changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page. Using the Main Menu button without saving the newly entered data will result in the data being lost.

- **S** Add another - Displays a blank process entry form to add a new process.
- **S** Save & Exit - Saves the data in the form, returns the user to the main permit data entry and editing page.
- **S** Save & Continue - Saves the data in the form, continues to the Pollutant form.

C Pollutant form

- **S** Main Menu/Abort Changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page. Using the Main Menu button without saving the newly entered data will result in the data being lost.
- **S** Save & Add another - Saves the data in the form, and displays a blank pollutant entry form to add a new pollutant.
- **S** Save & Main Menu - Saves the data in the form, returns the user to the main permit data entry and editing page.
- **S** New Process - Does **not** save the data in the pollutant form, continues to a new process form.

Some data fields will be marked with a diamond icon:

These fields are mandatory and must be filled out in order for the page to be saved. Please note that additional fields are required for promotion of the determination, and are discussed in Section 4.5 of this volume.

Facility-wide emissions can be entered on this form. It is recommended that the form be saved before entering this portion of the data.

The Edit In-Process Determination option (discussed in the section below) may provide more flexibility when entering information for a new determination by allowing the user to move to any screen in the determination entry. In that case, enter the new determination's facility data while using the Add a New Determination module, then press the Save and Exit button. Then use the Edit In-Process Determination option to enter process and pollutant data.

5.2 EDIT IN-PROCESS DETERMINATION

The second button on the main RBLC Data Entry Page is labeled Edit In-Process Determination. This allows edits to determinations in the transient data base. The entry forms for facility, process, and pollutant level data are the same as those in the Add a New Determination option, with three exceptions: a pull-down menu for the choice of entry status on the facility form, a button allowing the user to mark determinations available to the public or not, and the wider range of choices

for navigation buttons. A selection must be made from the entry status menu before changes to the facility level data can be saved. Entry status menu selections are: In Process; Ready for QA; and QA Complete. Agencies entering data should mark their incomplete and in progress entries as being In Process. Once an agency has completed their own QA, and are ready to send the completed determination entry to the EPA, the entry should be marked Ready for QA. The QA Complete flag is used by EPA's contractors and EPA to designate determinations ready for promotion.

The data entry forms and navigation buttons available are:

- Facility form
  - Main Menu/Abort Changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page. Using the Main Menu button without saving the newly entered data will result in the data being lost.
  - Save/Update - Saves and updates the data in the form.
  - Process List - Displays the process selection form.
  - Make [RBLC facility ID] Non-Viewable/Publically Viewable - Allows data to remain private until released for public view.

- Process selection form
  - Main Menu - Returns the user to the main permit data entry and editing page.
  - Edit Facility - Returns the user to the facility form.
  - Process selection drop-down list - Lists all processes entered for this determination.
  - Edit Process - Displays the process selected.
  - Pollutant List - Displays a pollutant selection form for the process' pollutants.

- Process form (Only the Save/Update button saves entered data):
  - Main Menu/Abort changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page.
  - Add Another - Displays another blank process form.
  - Save/Update - Saves and updates the data in the form.
  - Process List- Displays the process selection form.
  - Pollutant List - Displays the process' pollutant selection form.
  - Facility Information - Returns the user to the facility page.

- Pollutant selection form
  - Main Menu/Abort changes - Prompts user to return and save data entered, then will return to the main permit data entry and editing page.
  - Process List - Displays the process selection form.
  - Edit Facility - Returns the user to the facility form.

- **S** Pollutant selection drop-down list - Lists all pollutants entered for the currently selected process.

- C Pollutant form (Only the Save/Update button saves entered data):
  - **S** Main Menu - Return the user to the main permit data entry and editing page.
  - **S** Add Another - Displays another blank pollutant form.
  - **S** Update/Save - Saves and updates the data in the form.
  - **S** Pollutant List - Displays the pollutant selection form.
  - **S** Process List - Displays the process selection form.
  - **S** Edit Facility - Returns the user to the facility page.

The Edit option allows for more flexibility in moving from screen to screen than when using the Add New Determination option. New processes, and pollutant entries can be made using the Edit option, but a new entry must be entered using the New Determination option.

5.3 EDIT COMPLETED DETERMINATION

There are cases when a determination needs to be re-edited after it has been through QA and promotion to the RBLC current data base. The third option on the main RBLC Data Entry page allows a user to select a determination from the current data base and transfer it to the transient data base for editing. In this option, the determination is selected using the same type of pull-down menu that is used in the Edit In-Process Determination option. Once a determination is selected, the facility level information is displayed, and then the determination is transferred to the transient data base by pressing the Edit button. The Edit In-Process Determination option is used to edit these determinations. The determination will take the same route through QA and EPA review before promotion into the current data base. Please note that the old (promoted) determination will remain available until the revised determination has been promoted. Once the revised determination has been promoted, the old version of the same determination will no longer be available.

5.4 PAPER (HARDCOPY) DATA SUBMISSION

EPA guidance for submitting determinations using the paper form is in Appendix F. Included is the most recent version of the paper form. In addition to the guidance provided in Appendix F, review the data fields and formats discussion in Section 4.5.

5.5 STANDALONE EDITOR

-- The Standalone Editor will be available in the summer of 2001.--

APPENDIX A
DATA SUBMITTAL FORM

This page has been intentionally left blank.

Mail to: **RACT/BACT/LAER CLEARINGHOUSE**
RBLC (MD-12)
US EPA
RTP, NC 27711

RACT/BACT/LAER CLEARINGHOUSE INPUT FORM

Date Submitted _____

Company/Plant Name: _____

Plant/Facility Contact Information:

Plant Contact Name: _____
Telephone Number: _____ Fax: _____
E-Mail Address: _____

Mailing Address: _____
_____
_____
_____
City: _____ State: _____ Zip Code: _____

Physical Plant Location Information: UTM Coordinates: X: _____ Y: _____ Zone: _____

Public Hearing Held? Y N (circle one)

The Source is: New Modified (circle one)

Permit Number: _____
AIRS Facility Number: _____
EPA ID Number: _____
SIC Code: _____

Scheduling Information: Date (circle one)

Received Application: ___/___/___ Estimated/Actual
Final Permit Issued: ___/___/___ Estimated/Actual
Start Up Operation: ___/___/___ Estimated/Actual
Compliance Verification: ___/___/___ Estimated/Actual

Company/Plant Location:
State _____
County _____

Permitting Agency Contact Information:

Permitting Agency: _____
Agency Contact: _____
Telephone Number: _____ Fax: _____
E-Mail Address: _____

Address: _____
_____
_____
County: _____ State: _____ Zip Code: _____

Class One Areas Affected within 250km of source:

Class One Area Name	Distance (km)	Class One Area Name	Distance (km)

Source Name:_____ Permit Number: _____

PLANTWIDE INFORMATION

Facility Notes: _____

Plant Information - Please include the following information on the facility being permitted:

Brief Plant Description/Narrative (for example - Chemical Plant, Steel Mill, Paint Manufacturing, etc.):_____

Brief Emission Source(s) Description (for example - boiler, paint spray booth, furnace, etc.):_____

Type(s) of Fuel Used at this Facility:_____

Description of the Pollution Abatement Strategy (for example - fabric filter, ESP, carbon adsorbers, powder coatings, etc.):_____

Plantwide Emissions/Emissions Increase Information (Rate After Control)**:**

Pollutant:	Emissions (T/YR):	Pollutant:	Emissions (T/YR):	Pollutant:	Emissions (T/YR):

Source Name: _____ Permit Number: _____

Process Information

Process Name/Description: _____

RBLC Process Code: _____ SCC Code: _____

Throughput Capacity/Size: _____ Primary Fuel: _____

Compliance Verified? Y N If so, By What Method? (circle those that apply): Stack Test? Y N Calculation? Y N
Other Test? Y N Inspection? Y N

Other Method? _____

Process Notes : _____

Pollutant Information

Pollutant Name: _____

CAS Number: _____

Pollution Reduction Method Description:

- ❑ Pollution Prevention (P2)
- ❑ Add-on Control Device
- ❑ Both P2 and Add-on
- ❑ No Controls Feasible

Pollution Prevention/Add-on Control Equipment Description: _____

Basis of Limit (circle one): BACT-PSD BACT-Other LAER MACT GACT RACT NSPS NESHAPS OTHER

No. of Pollution Reduction Options Examined: _____ Overall % Efficiency of Control/ Prevention System: _____

Rank of Pollution Reduction Option Selected: _____ Emission Type? (circle one): area point fugitive

Emission Limits: Primary: _____ Alternative: _____

RBLC Standard Emission Limit (where applicable): _____

Pollution Control Cost Info: Costs verified by Agency? Yes No O & M Costs: _____ Annualized Costs: _____ Capital Costs: _____

Costs are in _____ (year) dollars. Cost Effectiveness ($/T of poll. removed): _____ Incremental Cost Effectiveness ($/T of poll. removed): _____

RBLC Input Form, page 4 (Pollutant Information - continuation page) Source Name: _____

Process Description: _____ Permit Number: _____ RBLC Process Code: _____

Information on Additional Pollutants

Pollutant Information

Pollutant Name: _____ CAS Number: _____

Pollution Reduction Method Description:

❑ Pollution Prevention (P2) ❑ Both P2 and Add-on
❑ Add-on Control Device ❑ No Controls Feasible

Pollution Prevention/Add-on Control Equipment Description: _____

Basis of Limit (circle one): BACT-PSD BACT-Other LAER MACT GACT RACT NSPS NESHAPS OTHER

No. of Pollution Reduction Options Examined: _____ Overall % Efficiency of Control/ Prevention System: _____

Rank of Pollution Reduction Option Selected: _____ Emission Type? (circle one): area point fugitive

Emission Limits: Primary: _____ Alternative: _____

RBLC Standard Emission Limit (where applicable): _____

Pollution Control Cost Info: Costs verified by Agency? Yes No O & M Costs: _____ Annualized Costs: _____ Capital Costs: _____

Costs are in _____ (year) dollars. Cost Effectiveness ($/T of poll. removed): _____ Incremental Cost Effectiveness ($/T of poll. removed): _____

Pollutant Information

Pollutant Name: _____ CAS Number: _____

Pollution Reduction Method Description:

❑ Pollution Prevention (P2) ❑ Both P2 and Add-on
❑ Add-on Control Device ❑ No Controls Feasible

Pollution Prevention/Add-on Control Equipment Description: _____

Basis of Limit (circle one): BACT-PSD BACT-Other LAER MACT GACT RACT NSPS NESHAPS OTHER

No. of Pollution Reduction Options Examined: _____ Overall % Efficiency of Control/ Prevention System: _____

Rank of Pollution Reduction Option Selected: _____ Emission Type? (circle one): area point fugitive

Emission Limits: Primary: _____ Alternative: _____

RBLC Standard Emission Limit (where applicable): _____

Pollution Control Cost Info: Costs verified by Agency? Yes No O & M Costs: _____ Annualized Costs: _____ Capital Costs: _____

Costs are in _____ (year) dollars. Cost Effectiveness ($/T of poll. removed): _____ Incremental Cost Effectiveness ($/T of poll. removed): _____

Appendix A -- Data Submittal Form and Instructions

INSTRUCTIONS FOR COMPLETING RACT/BACT/LAER CLEARINGHOUSE INPUT FORM

1. **Company Name/Site Location:** Insert name and address of the proposed facility. The address should be the location of the proposed facility not the address of the parent company unless they are the same.

2. **Plant/Facility Contact Information:** The is a person knowledgeable about the process at the plant or facility being permitted. Enter the name, telephone numbers (voice and fax), e-mail address, and physical address of the plant contact. (A check box has been provided if the plant's and the plant contact's physical address are the same.)

3. **Permitting Agency Contact Information:** Indicate the person at the permitting agency to whom requests should be directed. This should be the person most capable of responding to factual questions concerning the source and processes subject to this permitting action. Please provide area code with the phone number, E-mail address, and conventional mail address.

4. **Physical Plant Location Information:** List the Universal Transverse Mercator (UTM) coordinates and UTM Zone of the facility being permitted. (This information is usually listed on United States Geological Survey (USGS) maps of the area where the facility is physically located.) The UTM coordinates are reported as Easting (X) and Northing (y). Easting indicate the horizontal or x coordinate within the UTM Zone for the source and Northing indicate the vertical or y coordinate within the UTM Zone for the source. The RBLC needs this information to determine proximity of the source to Class I areas (e.g., National Parks, Wilderness Areas, etc.). Please list the names of the Class One Areas within 100km of the source and Class One areas located within 100 to 250km of the source and their distance to the source.

5. **Permit/File Number:** This should be the identification number assigned by the agency that issued the permit.

6. **ID Numbers and Codes:** Fill-in the requested AIRS identification number, if available, and the SIC code.

7. **Scheduling Information:** Permitting scheduling dates stored include:

    - receipt of application (estimated or actual)
    - final permit issued (estimated or actual)

- start-up operation (estimated or actual)
- compliance verification (estimated or actual)

Please enter all of the scheduling information available.

8. Plantwide Emissions/Emissions Increase Information: Provide the name of each pollutant emitted in significant amounts and indicate the maximum amount of emissions (tons/year) that is anticipated for each pollutant (facility-wide, all processes) under this permit.

9. Plantwide Information: Please describe the facility being permitted. Descriptions should be summary and brief. Examples are as follows:

Plant Level - In brief terms, indicate what kind of plant this is; for example: Integrated Steel Plant, Primary Aluminum Production, Publication Printing, Coil Coating, Power Plant, Oil Refinery; Coffee Roasting; Wastewater Treatment Plant; etc. A detailed narrative about the plant is not needed.

Source Level - List major processes that are part of the permitted source; for example: boiler, turbine, coke oven, rotogravure printing press, solid waste incinerator, coating line, lead smelter, air oxidation process, volatile organic liquid storage, etc. A detailed narrative about the process is not needed.

Fuel Type - List all fuels that will be used at this facility; for example: coal, # 2 distillate oil, process gas, etc. Again, a detailed narrative about the fuels used is not necessary.

Pollution Abatement Strategy - List all major pollution prevention and control systems/devices that will be used to reduce or eliminate air pollution; for example: powder coatings, low sulfur fuel, electrostatic precipitator, carbon adsorption, etc.

10. Facility Notes: This section is for the completion or elaboration of any of the above items where space was a problem. Also, any information that you feel other agencies should know about this determination should appear here. Notes are typically used for the following:

- More than one permit number [See note under Permit Number.]
- More detail on a particular process
- More than one contact person
- Further explanation regarding the designation of a source as new or modified
- Further explanation of the emission limit or the support documentation associated with setting the limit (i.e., limit based on design or stack test)

11. **Process Description:** List all processes subject to this permit by name (e.g., kiln, boiler) for which a throughput limit, operating limit, emission limit, control strategy, performance or equipment standard has been specified. Use additional pages as necessary. Additional information on a process may be placed in the Process Notes section.

    Process name or process equipment should be listed using one of the process categories listed in Appendix C (Detailed Listing of Proposed Process Categories). A descriptor may be added behind the generic category name. For example,

    Boiler, coal-fired, 3 each
    Kiln, 3 each
    Conveyors, coal/limestone
    Furnace, arc
    Boiler, recovery
    Boiler, power
    Engines, gas-fired

12. **Process Type Code:** A code assigned to each process (see Appendix B) used to categorize determinations.

    [We really need this so please use the drop-down list. Do not use the codes that end in "000". The "000" code are category codes. Also, try and avoid using the codes that end in "999" as they are catch-all categories. If you do not enter an RBLC Process code, we will try to figure it out. If we can't, you will get a phone call.]

13. **SCC Code:** This code is the standard source classification for processes used throughout the Office of Air at EPA.

    [We really need this so please use the drop-down list. If this is not listed, we will try to figure it out. If we can't, you will get a phone call.]

14. **Throughput Capacity:** Indicate the maximum design capacity of the unit. Use the same units of measure used in the NSPS to describe the size of a source. Wherever possible, use the list of standardized abbreviations for process and emission limit - Appendix D.

15. **Compliance Verification:** This series of fields allows you to enter a yes or no response to the following questions:

    - Compliance verified?
    - Method of confirmation:
        Stack testing?
        Other testing?

Inspection?
Calculations?

You may also enter a narrative description of other types of confirmation methods.

[If you leave this field blank, it defaults to "no" to indicate that compliance was not verified.]

16. **Process Notes**: This field should contain any additional information on the process being permitted.

17. **Pollutant(s) Emitted:** Make an entry for each pollutant or parameter for which a control requirement or other restraint has been specified (PM, SO_2 CO_2, NO_2, opacity, or others). Use a separate block for each entry, and identify the pollutant and provide its Chemical Abstracts (CAS) number. Use the following standard abbreviations for these common pollutants whenever possible:

PM	Particulate Matter
SOX	Sulfur Oxides
NOX	Nitrogen Oxides
CO	Carbon Monoxide
VOC	Volatile Organic Compounds
VE	Visible Emissions
TRS	Total Reduced Sulfur
F	Fluoride
Be	Beryllium
H_2S	Hydrogen Sulfide
Hg	Mercury
VC	Vinyl Chloride

Abbreviations for other pollutants are listed in Appendix D, along with CAS numbers.

[Use the drop-down list. To quickly get to say "PM," just type a "P." This will move you down the list to the start of the P's. We are working on cleaning up this list, but at this time many pollutants are listed more than once. The one to choose is the one that lists the pollutant name and its CAS number. For those pollutants that cover a range of pollutants (PM, PM10, NOx, SOx, VOC, opacity etc) the RBLC uses a custom CAS number. For example, these are the right drop-down entries in the Pollutant Name list to choose for the examples listed above: PM - "PM,PM"; PM10 - "PM10, PM"; NOx - "NOx, 10102"; SOx - "SOx, 7446"; VOC - "VOC, VOC"; opacity - "VE,VE".

Do <u>not</u> choose a pollutant that is not in the "name, CAS#" format because it will have to

be changed. If you cannot find the pollutant you need to list in the drop-down, please send me an e-mail at <steigerwald.joe@epa.gov> and I will add it (along with its CAS number) to the list.]

18. **Emission Limit(s):** For consistency and ease of comparison, list the emission limit or rate in the units of measure listed in Appendix C or those used in AP-42. Wherever possible use the list of standard abbreviations (Appendix D).

    There are multiple emission limits in the Clearinghouse, they are:

    - Primary emission limit and units: The primary emission limit listed in the permit.

    - Alternate emission limit and units: If provided on the permit, these numbers represent any alternate emission measurements which the facility may make.

    - Standardized limit and units: This limit allows comparison with other similar determinations in the RBLC. Standard units are provided for certain process types (see Appendix D) so that users can compare the entries in this field to determine the most stringent limits.

    The base-line limit is no longer used in the RBLC data base.

19. **Emission Type:** A one-character field indicating whether the emission is fugitive, point-source, or area-source.

20. **Pollution Reduction Ranking Information:** Two pieces of information are requested: The number of options examined and the rank of the option selected. The "rank" is the number of the option selected when the options are ordered according to the performance of the system. Number 1 would be the best controlled system, number 2 would be the next best, etc.

21. **Regulatory Requirements Associated with Limit (Basis of Limit):** Indicate the regulatory requirement that precipitated establishing the limit presented, i.e., BACT-PSD, BACT-Other, LAER, MACT, RACT, GACT, NSPS, NESHAP, or Other. Do not list such items as stack test, design or others. These items generally represent the supporting information that may have been used to document or establish the given limit. Such items should be included in the notes section.

    To facilitate the identification of limits use the following abbreviations:

    - BACT-PSD (Prevention of Significant Deterioration)
    - BACT-Other (regulated by State/local rules, not PSD)
    - LAER (lowest Available Control Technology)

- MACT (Maximum Achievable Control Technology)
- RACT (Reasonably Available Control Technology)
- GACT (Generally Available Control Technology)
- NSPS (New source Performance Standards)
- NESHAP (National Emission Standards for Hazardous Air Pollutants)
- Other

22. **Pollution Reduction Method Description:** Describe the specific pollution prevention techniques and add-on equipment used to achieve the permitted emission limits. Specify "NONE" if no controls are feasible. Pollution prevention techniques include operational modifications, limits in the type and amount of raw materials used, limits on throughput or hours of operation, maintenance requirements, equipment specifications, or other limitations. Typical add-on equipment includes ESP, fabric filter, etc. Information in this section may be supplemented under the "Notes" section.

    Please note that the RBLC no longer has separate fields for equipment manufacturer and model number. Place this information, if you have it, in the notes.

    [Please note that if you specify “NONE” for this field and then enter something in the Description field, you will get a phone call asking you if you really meant to put “NONE.”

23. **Overall Efficiency %:** Enter the overall system pollution reduction efficiency, consisting of capture (hoods, ductwork, etc.) and collection (control device) efficiency. Any breakdown of efficiencies for capture or collection individually should be shown under "Notes." For P2, indicate the overall effectiveness of the P2 methods.

24. **Cost Data:** Pollution reduction costs include:

    - Year of the dollar used in cost calculations
    - Cost verified by the permitting agency (yes or no)
    - Cost effectiveness in dollars per ton (annualized cost/tons of pollutant removed)
    - Capital cost of control equipment
    - Annual operation and maintenance cost for all control methods
    - Annualized cost (amortized capital cost + annual operation & maintenance costs)

When you have completed the form, mail it to the following address:

RACT/BACT/LAER CLEARINGHOUSE
RBLC (MD-12)
US EPA
RTP, NC 27711

APPENDIX B
AGENCY CODE LISTING

This page has been intentionally left blank.

Appendix B -- Agency Code Listing

ALABAMA

AL001	Alabama Dept of Environmental Mgmt
AL002	Huntsville Air Poll Control Agency, AL
AL003	Jefferson Co Department of Health, AL
AL999	Other Alabama

ALASKA

AK001	Alaska Dept of Environmental Cons
AK002	Fairbanks North Star Borough, AK
AK003	S. Central Air, Anchorage APCA, AK
AK999	Other Alaska

AMERICAN SAMOA

AS001	American Samoa Env Quality Commission
AS999	Other American Samoa

ARIZONA

AZ001	Arizona Dept of Env Qual, Ofc of Air Qua
AZ002	Maricopa Co Air Pollution Control, AZ
AZ003	Pima Co Dept of Env Quality, AZ
AZ004	Pinal Co Air Quality Control Dist, AZ
AZ999	Other Arizona

ARKANSAS

AR001	Arkansas Dept of Poll Ctrl & Ecology
AR999	Other Arkansas

CALIFORNIA

CA001	California Air Resources Board
CA002	Amador County APCD, CA
CA003	Bay Area AQMD, CA
CA004	Butte County APCD, CA
CA005	Calaveras County APCD, CA

CA006	Colusa County APCD, CA
CA007	El Dorado County APCD, CA
CA046	Feather River AQMD, CA
CA008[1]	Fresno APCD, CA
CA009	Glenn County APCD, CA
CA010	Great Basin Unified APCD, CA
CA011	Imperial County APCD, CA
CA012	Kern County APCD, CA
CA013[4]	Kings County APCD, CA
CA014	Lake County AQMD, CA
CA015	Lassen County APCD, CA
CA016[4]	Madera County APCD, CA
CA017	Mariposa County APCD, CA
CA018	Mendocino County AQMD, CA
CA019[4]	Merced County APCD, CA
CA020	Modoc County APCD, CA
CA029	Mojave Desert AQMD, CA
CA021	Monterey Bay Unified APCD, CA
CA022[4]	Mountain Counties Air Basin, CA
CA023	North Coast Unified AQMD, CA
CA024	Northern Sierra AQMD, CA
CA025	Northern Sonoma County APCD, CA
CA026	Placer County APCD, CA
CA027[4]	Plumas County Env. Health Department, CA
CA028	Sacramento Metropolitan AQMD, CA
CA030	San Diego County APCD, CA
CA047	San Joaquin Valley Unified APCD - Central Regional Office, CA
CA048	San Joaquin Valley Unified APCD - Northern Regional Office, CA
CA049	San Joaquin Valley Unified APCD - Southern Regional Office, CA
CA032	San Luis Obispo County APCD, CA
CA033	Santa Barbara County APCD, CA
CA034	Shasta County AQMD, CA
CA035	Siskiyou County APCD, CA
CA036	South Coast AQMD, CA
CA037[4]	Standards County APCD, CA
CA038[4]	Stanislaus County APCD, CA
CA039[4]	Sutter County APCD, CA
CA040	Tehama County APCD, CA
CA041[4]	Tulare County APCD, CA
CA042	Tuolumne County APCD, CA
CA043	Ventura County APCD, CA
CA044	Yolo-Solano APCD, CA
CA045[4]	Yuba County APCD, CA

[1] No longer active. Listed for historical purposes only.

CA999	Other California

COLORADO

CO001	Colorado Dept of Health - Air Poll Ctrl
CO002	Boulder County Health Department, CO
CO003	Denver City-Co Air Qual/Env Prot, CO
CO004	El Paso County Health Department, CO
CO005	Jefferson Co Dept of Health & Env, CO
CO006	Larimer Co Health Dept, Env Health, CO
CO007	Mesa County Health Department, CO
CO008	Pueblo City-County Health Department, CO
CO009	Weld County Health Department, CO
CO999	Other Colorado

CONNECTICUT

CT001	Connecticut Bureau of Air Management
CT002	Bristol-Burlington Health Department, CT
CT003	City of Meriden, Dept Human Serv, CT
CT004	Dept of Air Poll Ctrl, Bridgeport, CT
CT005	Greenwich Department of Health, CT
CT006	New Haven Health Department, CT
CT007	Norwalk Department of Health, CT
CT008	Stamford Health Department, CT
CT009	Stratford Department of Health, CT
CT999	Other Connecticut

DELAWARE

DE001	Delaware Dept of Natural Res & Env Ctrl
DE999	Other Delaware

DISTRICT OF COLUMBIA

DC001	DC Air Qual Control & Monitoring Branch
DC999	Other District of Columbia

FLORIDA

FL001	Florida Dept of Env Regulation
FL002	Broward Co Ofc of Nat Res Prot, FL
FL003	City of Jacksonville, FL
FL004	Hillsborough Co Env Prot Comm, FL
FL005	Jacksonville, Bio-Environmental Serv, FL

FL006	Manatee County Public Health Unit, FL
FL007	Metro Dade Co Dept of Env Res Mgmt, FL
FL008	Palm Beach County Public Health Unit, FL
FL009	Pinellas Co Dept of Env Mgmt, FL
FL010	Sarasota County Air Program, FL
FL999	Other Florida

GEORGIA

GA001	Georgia Department of Natural Resources
GA999	Other Georgia

GUAM

GU001	Guam Environmental Protection Agency
GU999	Other Guam

HAWAII

HI001	Hawaii Clean Air Branch
HI999	Other Hawaii

IDAHO

ID001	Idaho Dept of Health & Welfare
ID999	Other Idaho

ILLINOIS

IL001	Illinois EPA, Div of Air Poll Control
IL002	Bedford Park Env Qual Ctrl Board, IL
IL003	Bensenville Air Poll Control Dist, IL
IL004	City of Chicago, Env Prot Div, IL
IL005	City of Evanston-Dept Bldg & Zoning, IL
IL006	Cook Co Dept of Env Control, IL
IL007	Dupage County Health Department, IL
IL008	Village of McCook Env Board, IL
IL999	Other Illinois

INDIANA

IN001	Indiana Dept of Env Mgmt, Ofc of Air
IN002	Anderson Air Pollution Control Dept, IN
IN003	E. Chicago Dept of Air Qual Control, IN
IN004	Evansville Air Pollution Control, IN

IN005	Gary Air Pollution Control, IN
IN006	Hammond Air Pollution Control Dept, IN
IN007	Indianapolis Air Poll Control Div, IN
IN008	Lake County Air Pollution Control, IN
IN009	St. Joseph County Air Poll Control, IN
IN010	Vigo County Air Pollution Control, IN
IN999	Other Indiana

IOWA

IA001	Iowa Department of Natural Resources
IA002	Linn County Health Department, IA
IA003	Polk County Physical Planning Dept, IA
IA999	Other Iowa

KANSAS

KS001	Kansas Bureau of Air and Waste Mgmt
KS002	Kansas City/Wyandotte Co Health Dept, KS
KS003	Topeka-Shawnee County Health Agency, KS
KS004	Wichita-Sedgwick Co Comm Health Dept, KS
KS999	Other Kansas

KENTUCKY

KY001	Kentucky DEP, Div for Air Quality
KY002	Jefferson Co APCD, KY
KY999	Other Kentucky

LOUISIANA

LA001	Louisiana Department of Env Quality
LA999	Other Louisiana

MAINE

ME001	Maine Department of Env Protection
ME999	Other Maine

MARYLAND

MD001	Maryland Department of the Environment
MD002	Allegany County Health Department, MD
MD003	Anne Arundel Co Air Qual Cont Prog, MD
MD004	Baltimore City Health Department, MD

MD005	Baltimore Co Bur Air Qual/Waste Mgmt, MD
MD006	Frederick County Health Department, MD
MD007	Harford County Health Department, MD
MD008	Howard County Health Department, MD
MD009	Montgomery County DEP, MD
MD010	Prince George's County Health Dept, MD
MD999	Other Maryland

MASSACHUSETTS

MA001	Massachusetts Div of Air Qual Control
MA002	Berkshire and Pioneer Valley APCD, MA
MA003	Boston Air Pollution Control Comm, MA
MA004	Massachusetts DEP, Central Reg Air Qual
MA005	Merrimack Valley & Metro Boston APCD, MA
MA006	SE Massachusetts Air Poll Ctrl Dist, MA
MA999	Other Massachusetts

MICHIGAN

MI001	Michigan Department of Natural Resources
MI002	City of Grand Rapids Env Serv Dept, MI
MI003	Wayne County Air Poll Control Div, MI
MI999	Other Michigan

MINNESOTA

MN001	Minnesota Poll Ctrl Agcy, Air Qual Div
MN002	City of Bloomington, Env Poll Sec, MN
MN003	City of Richfield, Air Poll Ctrl, MN
MN004	Minneapolis Pollution Control Div, MN
MN005	St. Louis Park Inspectional Serv, MN
MN999	Other Minnesota

MISSISSIPPI

MS001	Mississippi Dept of Env Quality
MS999	Other Mississippi

MISSOURI

MO001	Missouri DNR, Air Poll Control Program
MO002	City of St. Louis Air Poll Ctrl, MO
MO003	Greene Co-City of Springfield APCA, MO
MO004	Kansas City, MO, Air Quality Section

MO005	St. Louis Co Air Poll Control Br, MO
MO999	Other Missouri

MONTANA

MT001	Montana Dept of Environmental Quality
MT002	Cascade City-Co Air Poll Ctrl Prog, MT
MT003	Missoula City-County Health Dept, MT
MT004	Yellowstone County Air Poll Control, MT
MT999	Other Montana

NEBRASKA

NE001	Nebraska Dept of Env Control
NE002	Lincoln-Lancaster Co Health Dept, NE
NE003	Omaha City Air Quality Control Div, NE
NE999	Other Nebraska

NEVADA

NV001	Nevada Dept of Cons and Natural Res
NV002	Clark Co Health Dist, Div APC, NV
NV003	Washoe County District Health Dept, NV
NV999	Other Nevada

NEW HAMPSHIRE

NH001	New Hampshire Dept of Env Serv, Air Res
NH999	Other New Hampshire

NEW JERSEY

NJ001	New Jersey Dept of Env Protection
NJ002	City of Elizabeth City Hall, NJ
NJ003	Hudson Regional Health Commission, NJ
NJ004	Middlesex Co Air Poll Ctrl Prog, NJ
NJ999	Other New Jersey

NEW MEXICO

NM001	New Mexico Env Improvement Div/Air Qual
NM002	Albuquerque Env Health & Energy Dept NM
NM999	Other New Mexico

NEW YORK

NY001	New York DEC, Div of Air Resources
NY002	Albany County Dept of Health, NY
NY003	Interstate Sanitation Commission, NY
NY004	Monroe County Department of Health, NY
NY005	Nassau Co DOH, Center for Env Prot, NY
NY006	New York City Bureau of Air Res, NY
NY007	Niagara Co Health Dept, Air Res Bur, NY
NY008	Rensselaer Co DOH, Div of Env Health, NY
NY009	Rockland Co DOH, Air Poll Ctrl, NY
NY010	Suffolk Co Ofc of Haz Mat Mgmt, NY
NY011	Westchester County Dept of Health, NY
NY999	Other New York

NORTH CAROLINA

NC001	North Carolina Div of Env Mgmt
NC002	Cleveland County Health Department, NC
NC003	Cumberland Co Air Pollution Control, NC
NC004	Forsyth County Env Affairs Dept, NC
NC005	Mecklenburg Co Dept of Env Prot, NC
NC006	W. North Carolina Reg Air Poll Ctrl Bd
NC999	Other North Carolina

NORTH DAKOTA

ND001	North Dakota State Department of Health
ND999	Other North Dakota

OHIO

OH001	Ohio Environmental Protection Agency
OH002	Akron Reg Air Quality Mgmt Dist, OH
OH003	Canton Air Pollution Control Div, OH
OH004	City of Toledo, Env Services Div, OH
OH005	Cleveland Div of Air Poll Control, OH
OH006	Hamilton Co-Southwestern OH APCA
OH007	Lake County General Health District, OH
OH008	Mahoning-Trumbull Air Poll Ctrl Agcy, OH
OH009	Montgomery Co Reg Air Poll Ctrl Agcy, OH
OH010	North Ohio Valley Air Authority, OH
OH011	Portsmouth Local Air Agency, OH
OH012	Dayton Regional Air Poll Ctrl Agency, OH
OH999	Other Ohio

OKLAHOMA

OK001	Oklahoma Air Quality Service
OK002	City-Co Health Dept of Oklahoma City
OK003	Tulsa City-County Health Department, OK
OK999	Other Oklahoma

OREGON

OR001	Oregon Dept of Environmental Quality
OR002	Lane Regional Air Poll Authority, OR
OR999	Other Oregon

PENNSYLVANIA

PA001	Pennsylvania DER, Bur of Air Qual Ctrl
PA002	Allegheny Co Bureau of Air Poll Ctrl, PA
PA003	Philadelphia DOPH, Air Mgmt Serv, PA
PA999	Other Pennsylvania

PUERTO RICO

PR001	Puerto Rico Env Quality Board
PR999	Other Puerto Rico

RHODE ISLAND

RI001	Rhode Island Div of Air & Haz Mat
RI999	Other Rhode Island

SOUTH CAROLINA

SC001	South Carolina Dept of Health & Env Ctrl
SC002	City of Columbia Air Poll Control, SC
SC999	Other South Carolina

SOUTH DAKOTA

SD001	South Dakota Dept of Water & Nat'l Res
SD999	Other South Dakota

TENNESSEE

TN001	Tennessee Div of Air Pollution Control

TN002	Chattanooga-Hamilton Co APCB, TN
TN003	Knox Co Dept of Air Poll Control, TN
TN004	Memphis and Shelby Co Health Dept, TN
TN005	Metro Health/Nashville & Davidson Co, TN
TN999	Other Tennessee

TEXAS

TX001	Texas Air Control Board
TX002	City of Dallas, Health & Human Serv, TX
TX003	City of Houston, Bureau Air Qual Cont, TX
TX004	El Paso County Health Unit, TX
TX005	Fort Worth Air Pollution Control, TX
TX006	Galveston County Health District, TX
TX007	Harris County Pollution Control Dept, TX
TX008	Lubbock City Health Department, TX
TX999	Other Texas

UTAH

UT001	Utah Bureau of Air Quality
UT999	Other Utah

VERMONT

VT001	Vermont Air Pollution Control Division
VT999	Other Vermont

VIRGIN ISLANDS

VI001	Virgin Islands Dept of Planning, Nat Res
VI999	Other Virgin Islands

VIRGINIA

VA001	Virginia Environmental Quality Air Division
VA999	Other Virginia

WASHINGTON

WA001	Washington State Department of Ecology
WA002	Benton-Franklin-Walla Walla Co APA, WA
WA003	Northwest Air Pollution Authority, WA

WA004	Olympic Air Poll Control Authority, WA
WA005	Puget Sound Air Poll Control Agency, WA
WA006	Southwest Air Poll Ctrl Authority, WA
WA007	Spokane Co Air Poll Control Auth, WA
WA008	Yakima County Clean Air Authority, WA
WA999	Other Washington

WEST VIRGINIA

WV001	West Virginia Air Pollution Control Comm
WV999	Other West Virginia

WISCONSIN

WI001	Wisconsin Dept of Natural Resources
WI002	Eau Claire City-Co Health Dept, WI
WI003	Madison Department of Public Health, WI
WI004	Milwaukee Co DPW, Env Serv Sec, WI
WI999	Other Wisconsin

WYOMING

WY001	Wyoming Air Qual Div, Dept of Env Qual
WY999	Other Wyoming

OTHER

OT001	National Park Service
OT002	EPA Region I
OT003	EPA Region II
OT004	EPA Region III
OT005	EPA Region IV
OT006	EPA Region V
OT007	EPA Region VI
OT008	EPA Region VII
OT009	EPA Region VIII
OT010	EPA Region IX
OT011	EPA Region X

APPENDIX C
PROCESS TYPE CODE LISTING

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Appendix C -- Process Code Listing

10.000 COMBUSTION

11.000 EXTERNAL COMBUSTION

11.001 Bagasses Combustion
11.002 Coal Combustion
11.006 Fuel Oil Combustion
11.003 Lignite Combustion
11.004 Multiple Fuels Combustion
11.005 Natural Gas Combustion
11.007 Waste Oil Combustion
11.008 Wood/Wood Waste Combustion
11.999 Other External Combustion Sources

15.000 INTERNAL COMBUSTION

15.001 Aviation Fuels
15.002 Diesel Fuel
15.006 Fuel Oil
15.003 Gasoline
15.007 Multiple Fuels
15.004 Natural Gas
15.005 Process Gas
15.999 Other Internal Combustion Sources

20.000 WASTE DISPOSAL

21.000 MUNICIPAL WASTE

21.001 Municipal Waste Combustors/Incinerators
21.002 Municipal Waste Landfills
21.003 Publicly Owned Treatment Works (POTW) Emissions (except 21.004)
21.004 Sewage Sludge Incineration
21.999 Other Municipal Waste Processing/Disposal Facilities

CODE PROCESS TYPE

22.000 HAZARDOUS WASTE

22.007 Asbestos Demolition, Renovation, and Disposal
22.001 Benzene Waste Treatment
22.006 Contaminated Soil Treatment
22.002 Hazardous Waste Incineration
22.003 Hazardous Waste Landfills
22.004 Site Remediation
22.005 Treatment, Storage and Disposal Facilities (TSDF) (except 22.002, 22.003 & 22.006)
22.999 Other Hazardous Waste Processing/Disposal Facilities

29.000 OTHER WASTE DISPOSAL (except 21 & 22)

29.001 Automobile Body Shredding/Incineration
29.002 Industrial Wastewater/Contaminated Water Treatment
29.003 Industrial Landfills
29.004 Medical/Infectious Waste Incineration
29.999 Other Waste Disposal Sources

30.000 WOOD PRODUCTS INDUSTRY

30.001 Charcoal
30.002 Kraft Pulp Mills
30.003 Plywood and Veneer Operations
30.004 Pulp and Paper Production other than Kraft
30.005 Reconstituted Panelboard Plants (waferboard, particleboard, etc.)
30.006 Wood Treatment
30.007 Woodworking
30.999 Other Wood Products Industry Sources

40.000 ORGANIC EVAPORATIVE LOSSES

41.000 SURFACE COATING/PRINTING/GRAPHIC ARTS

CODE PROCESS TYPE

41.001 Aerospace Surface Coating
41.002 Automobiles and Trucks Surface Coating (OEM)
41.003 Automotive Refinishing
41.004 Can Surface Coating
41.005 Fabric Coating/Printing/Dyeing (except 41.017)
41.006 Flatwood Paneling Surface Coating
41.007 Flexible Vinyl & Urethane Coating/Printing
41.008 Large Appliance Surface Coating
41.026 Leather Surface Coating
41.009 Magnetic Tape Surface Coating
41.010 Magnetic Wire Surface Coating
41.011 Metal Coil Surface Coating
41.012 Metal Furniture Surface Coating
41.013 Miscellaneous Metal Parts and Products Surface Coating
41.014 Paper, Plastic & Foil Web Surface Coating (except 41.007 & 41.018)
41.015 Plastic Parts for Business Machines Surface Coating
41.016 Plastic Parts & Products Surface Coating (except 41.015)
41.017 Polymeric Coating of Fabrics
41.018 Pressure Sensitive Tapes and Labels Coating
41.019 Printing - Forms
41.020 Printing - News Print
41.021 Printing - Packaging
41.022 Printing - Publication
41.023 Printing/Publication (except 41.007 & 41.019-022)
41.024 Ship Building & Repair Surface Coating
41.025 Wood Products/Furniture Surface Coating (except 41.006)
41.999 Other Surface Coating/Printing/Graphic Arts Sources

42.000 LIQUID MARKETING (PETROLEUM PRODUCTS, GASOLINE, VOL)

42.001 Gasoline Bulk Plants
42.002 Gasoline Bulk Terminals
42.003 Gasoline Marketing (except 42.001 & 42.002)
42.004 Petroleum Liquid Marketing (except 42.001-003 & 42.005-006)
42.005 Petroleum Liquid Storage in Fixed Roof Tanks
42.006 Petroleum Liquid Storage in Floating Roof Tanks
42.009 Volatile Organic Liquid Storage
42.010 Volatile Organic Liquid Marketing (except 42.009)

CODE PROCESS TYPE

42.999 Other Liquid Marketing Sources

49.000 ORGANIC EVAPORATIVE LOSSES (except 41 & 42)

49.001 Aerosol Can Filling
49.012 Architectural & Industrial Maintenance (AIM) Coatings
49.013 Automobile Refinish Coatings
49.011 Consumer Products
49.002 Dry Cleaning - PERC/Chlorinated Solvents
49.003 Dry Cleaning - Petroleum Solvents
49.004 Fiberglass Boat Manufacturing
49.005 Fiberglass/Reinforced Polymer Products Manufacturing (except 49.004)
49.006 Halogenated Solvent Cleaners
49.007 Ink Manufacturing
49.008 Organic Solvent Cleaning & Degreasing (except 49.006)
49.009 Paint/Coating/Adhesives Manufacturing
49.010 Paint Stripping
49.999 Other Organic Evaporative Loss Sources

50.000 PETROLEUM/NATURAL GAS PRODUCTION AND REFINING

50.001 Oil and Gas Field Services
50.002 Natural Gas/Gasoline Processing Plants
50.003 Petroleum Refining Conversion Processes (cracking, CO boilers, reforming, alkylation, polymerization, isomerization, coking)
50.007 Petroleum Refining Equipment Leaks/Fugitive Emissions
50.004 Petroleum Refining Feedstock (blending, loading and unloading)
50.008 Petroleum Refining Flares and Incinerators (except acid gas/sulfur recovery unit incinerators - 50.006)
50.005 Petroleum Refining Separation Processes (distillation and light ends recovery)
50.006 Petroleum Refining Treating Processes (hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, deasphalting, sulfur recovery units, acid gas/sulfur recovery unit incinerators)
50.009 Petroleum Refining Wastewater and Wastewater Treatment
50.010 Shale Processing
50.999 Other Petroleum/Natural Gas Production & Refining Sources (except 50.001-010 and 42.000 - Liquid Marketing

CODE PROCESS TYPE

60.000 CHEMICALS MANUFACTURING

61.000 AGRICULTURAL CHEMICALS MANUFACTURING

61.001 2,4-D Salts and Esters Production
61.002 4-Chloro-2-Methylphenoxyacetic Acid Production
61.003 4,6-Dinitro-o-Cresol Production
61.004 Captafol (tm) Production
61.005 Captan (tm) Production
61.006 Chloroneb (tm) Production
61.007 Chlorthalonil (tm) Production
61.008 Dacthal (tm) Production
61.012 Fertilizer Production (except 61.009)
61.009 Phosphate Fertilizers Production
61.010 Sodium Pentachlorophenate Production
61.011 Tordon Acid Production
61.999 Other Agricultural Chemical Manufacturing Sources

62.000 INORGANIC CHEMICALS MANUFACTURING

62.001 Ammonium Sulfate Production - Caprolactam By-Product Plants
62.002 Antimony Oxides Manufacturing
62.003 Chlorine Production
62.016 Chloroalkali Production
62.004 Chromium Chemicals Manufacturing
62.005 Cyanuric Chemicals Manufacturing
62.006 Fume Silica Production
62.007 Hydrochloric Acid Production
62.017 Hydrofluoric Acid Production
62.008 Hydrogen Cyanide Production
62.009 Hydrogen Fluoride Production
62.020 Inorganic Liquid/Gas Storage & Handling
62.014 Nitric Acid Plants
62.010 Phosphoric Acid Manufacturing
62.011 Quaternary Ammonium Compounds Production
62.018 Sodium Carbonate Production

62.012 Sodium Cyanide Production
62.015 Sulfuric Acid Plants
62.019 Sulfur Recovery (except 50.006)
62.013 Uranium Hexafluoride Production
62.999 Other Inorganic Chemical Manufacturing Sources

63.000 POLYMER AND RESIN PRODUCTION

63.001 Acetal Resins Production
63.002 Acrylonitrile-Butadiene-Styrene Production
63.003 Alkyd Resins Production
63.004 Amino Resins Production
63.005 Butadiene-Furfural Cotrimer (R-11)
63.006 Butyl Rubber Production
63.007 Carboxymethylcellulose Production
63.008 Cellophane Production
63.009 Cellulose Ethers Production
63.010 Epichlorohydrin Elastomers Production
63.011 Epoxy Resins Production
63.012 Ethylene-propylene Rubber Production
63.013 Flexible Polyurethane Foam Production
63.014 Hypalon (tm) Production
63.015 Maleic Copolymers Production
63.016 Methylcellulose Production
63.017 Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production
63.018 Methyl Methacrylate-Butadiene-Styrene Terpolymers Production
63.019 Neoprene Production
63.020 Nitrile Butadiene Rubber Production
63.021 Non-Nylon Polyamides Production
63.022 Nylon 6 Production
63.023 Phenolic Resins Production
63.024 Polybutadiene Rubber Production
63.025 Polycarbonates Production
63.026 Polyester Resins Production
63.027 Polyether Polyols Production
63.028 Polyethylene Terephthalate Production
63.029 Polymerized Vinylidene Production
63.030 Polymethyl Methacrylate Resins Production

CODE PROCESS TYPE

63.031 Polystyrene Production
63.032 Polysulfide Rubber Production
63.033 Polyvinyl Acetate Emulsions Production
63.034 Polyvinyl Alcohol Production
63.035 Polyvinyl Butyral Production
63.036 Polyvinyl Chloride and Copolymers Production
63.037 Reinforced Plastic Composites Production
63.038 Styrene-Acrylonitrile Production
63.039 Styrene Butadiene Rubber and Latex Production
63.999 Other Polymer and Resin Manufacturing Sources

64.000 SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI)

64.001 Batch Reaction Vessels (except 69.011)
64.002 Equipment Leaks (valves, compressors, pumps, etc.)
64.003 Processes Vents (emissions from air oxidation, distillation, and other reaction vessels)
64.004 Storage Tanks (SOCMI Chemicals (loading/unloading, filling, etc.)
64.005 Transfer of SOCMI Chemicals (loading/unloading, filling, etc.)
64.006 Wastewater Collection & Treatment
64.999 Other SOCMI Industry Sources

65.000 SYNTHETIC FIBERS PRODUCTION

65.001 Acrylic Fibers/Modacrylic Fibers Production
65.002 Rayon Production
65.003 Spandex Production
65.999 Other Synthetic Fibers Production Sources

69.000 CHEMICAL MANUFACTURING (except 61, 62, 63, 64 & 65)

69.001 Benzyltrimethylammonium Chloride Facilities
69.002 Butadiene Dimers Production
69.015 Carbon Black Manufacturing
69.003 Carbonyl Sulfide Production
69.004 Chelating Agents Production

69.005 Chlorinated Paraffins Production
69.006 Dodecanedioic Acid Production
69.007 Ethylidene Norbornene Production
69.008 Explosives Production
69.009 Hydrazine Production
69.010 OBPA/1,3-Diisocyanate Production
69.011 Pharmaceuticals Production
69.012 Photographic Chemicals Production
69.013 Phthalate Plasticizers Production
69.017 Propellant Manufacturing & Production
69.014 Rubber Chemicals Manufacturing
69.016 Soap & Detergent Manufacturing
69.999 Other Chemical Manufacturing Sources

70.000 FOOD AND AGRICULTURAL PRODUCTS (also see 61 - AGRICULTURAL CHEMICALS)

70.016 Alcohol Fuel Production
70.008 Alcoholic Beverages Production
70.001 Alfalfa Dehydrating
70.002 Baker's Yeast Manufacturing
70.003 Bread Bakeries
70.004 Cellulose Food Casing Manufacturing
70.005 Coffee Roasting
70.006 Cotton Ginning
70.007 Feed and Grain Handling, Storage & Processing (including Mills and Elevators)
70.009 Fish Processing
70.010 Fruit and Vegetable Processing
70.011 Meat Smokehouses
70.012 Roasting (except 70.005)
70.013 Starch Manufacturing
70.014 Sugar Cane Processing
70.015 Vegetable Oil Production
70.999 Other Food and Agricultural Products Sources

80.000 METALLURGICAL INDUSTRY

CODE PROCESS TYPE

81.000 FERROUS METALS INDUSTRY

81.001 Coke By-product Plants
81.002 Coke Production (except 81.001)
81.003 Ferroalloy Production
81.004 Iron Foundries
81.005 Stainless Steel/Specialty Steel Manufacturing
81.006 Steel Foundries
81.007 Steel Manufacturing (except 81.005 & 81.006)
81.008 Steel Pickling - HCL Process
81.999 Other Ferrous Metals Industry Sources

82.000 NONFERROUS METALS INDUSTRY

82.016 Beryllium Processing and Manufacturing
82.001 Lead Acid Battery Manufacturing
82.002 Lead Acid Battery Reclamation
82.003 Lead Oxide and Pigment Production
82.004 Lead Products (except 82.001-002, 82.006 & 82.012)
82.005 Primary Aluminum Production
82.006 Primary Copper Smelting
82.007 Primary Lead Smelting
82.008 Primary Magnesium Refining
82.009 Primary Zinc Smelting
82.010 Secondary Aluminum Production
82.011 Secondary Brass & Brass Ingot Production
82.012 Secondary Copper Smelting & Alloying
82.013 Secondary Lead Smelting
82.014 Secondary Magnesium Smelting
82.015 Secondary Zinc Processing
82.999 Other Non-Ferrous Metals Industry Sources

90.000 MINERAL PRODUCTS

90.001 Alumina Processing
90.035 Asbestos Manufacturing

CODE PROCESS TYPE

90.002 Asphalt/Coal Tar Application - Metal Pipes
90.003 Asphalt Concrete Manufacturing
90.004 Asphalt Processing (except 90.002, 90.003 & 90.034)
90.034 Asphalt Roofing Products Manufacturing
90.017 Calciners & Dryers and Mineral Processing Facilities
90.005 Calcium Carbide Manufacturing
90.006 Cement Manufacturing (except 90.028)
90.007 Chromium Refractories Production
90.008 Clay and Fly Ash Sintering
90.009 Clay Products (including Bricks & Ceramics)
90.010 Coal Conversion/Gasification
90.011 Coal Handling/Processing/Preparation/Cleaning
90.012 Concrete Batch Plants
90.013 Elemental Phosphorous Plants
90.014 Frit Manufacturing
90.015 Glass Fiber Manufacturing (except 90.033)
90.016 Glass Manufacturing
90.017 Calciners
90.018 Lead Ore Crushing and Grinding
90.019 Lime/Limestone Handling/Kilns/Storage/Manufacturing
90.020 Mercury Ore Processing
90.021 Metallic Mineral/Ore Processing (except 90.018, 90.020 & 90.031)
90.022 Mineral Wool Manufacturing
90.023 Mining Operations (except 90.032)
90.024 Non-metallic Mineral Processing (except 90.011, 90.019, 90.017, 90.026) (NOTE: This category includes stone quarrying, sand and gravel processing, gypsum processing, perlite processing and all other non-metallic mineral/ore processing.)
90.026 Phosphate Rock Processing
90.027 Phosphogypsum Stacks
90.028 Portland Cement Manufacturing
90.029 Refractories
90.031 Taconite Iron Ore Processing
90.032 Underground Uranium Mines
90.033 Wool Fiberglass Manufacturing
90.999 Other Mineral Processing Sources

CODE PROCESS TYPE

99.000 MISCELLANEOUS SOURCES

99.001 Abrasive Blasting
99.002 Chromic Acid Anodizing
99.003 Comfort Cooling Towers
99.004 Commercial Sterilization Facilities
99.005 Decorative Chromium Electroplating
99.006 Electronics Manufacturing (except 99.011)
99.013 Electroplating/Plating (except Chrome - 99.002, 99.005 & 99.007)
99.019 Geothermal Power
99.007 Hard Chromium Electroplating
99.008 Hospital Sterilization Facilities
99.009 Industrial Process Cooling Towers
99.017 Leather Tanning
99.014 Polystyrene Foam Products Manufacturing
99.016 Polyurethane Foam Products Manufacturing
99.020 Rocket Demilitarization
99.010 Rocket Engine Test Firing
99.015 Rubber Tire Manufacturing and Retreading
99.011 Semiconductor Manufacturing
99.018 Synthetic Fuels Production (except 70.016 & 90.010)
99.012 Welding & Grinding
99.999 Other Miscellaneous Sources

APPENDIX D
ABBREVIATIONS FOR PROCESSES, UNITS, AND POLLUTANTS

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Appendix D -- Abbreviations for Processes, Units, and Pollutants

Abbreviations for Processes and Descriptors

Abbreviation	Process or Descriptor
ADD	additive
AL	aluminum
AM	American
ASSOC	association
ATMOS	atmospheric
CALC	catalytic
CEM	continuous emission monitoring
CO	company
COLL	collection
COOP	cooperative
CORP	corporation
DECARB	decarbonization
DESULF	desulfurization
DISTIL	distillation
DISTN	distribution
DIV	division
E	eastern
EA	each
EFF	efficiency
ELECT	electric
EMISS	emissions
ENVIRON OR ENV	environmental
ESP	electrostatic precipitator
FAC	facility
FCC	fluid catalytic cracking
FCCU	fluid catalytic cracking unit
FGR	flue gas recirculation
FURN	furnace
GEN	generator
HAND	handling
HRSG	heat recovery steam generator
HVLP	high-volume, low pressure (spray guns)
I.C.	internal combustion
INCIN	incinerator
INDEP	independent
INTERNAT	international
LAB	laboratory
LDOUT	loadout

Abbreviation	Process or Descriptor
LIQ	liquid
LT	light
MATL	material
MFG	manufacturing
MISC	miscellaneous
MODIF	modification
NAT	natural
NATL	national
POLL	pollutant/pollution
PREP	preparation
PROD	production
PWR	power
REC	recovery
RECIP	reciprocating
RECLAM	reclamation
REFIG	refrigeration
REFIN	refinery
REG	regular
REGEN	regenerator
RESID	residual
ROT	rotary
SCR	selective catalytic reduction
SCRUB	scrubber
SECOND	secondary
SHIP	shipping
SNCR	selective non-catalytic reduction
SOLN	solution
STOR	storage
SUP	supplementary
SYS	system
TRANS	transmission
UNIV	university
VAC	vacuum
VERT	vertical

Abbreviations for Emission Limit Units

Abbreviation	Emission Limit Unit
ACF	actual cubic feet
ACFM	actual cubic feet per minute
ACS	applied coating solids
ADP	air dried pulp
ADTP	air dried tons product
ADTFP	air dried tons of final product
ADTUBP	air dried tons of unbleached pulp
ADUP	air dried unbleached pulp
AMP-H	ampere hours
AV	average
BBL	barrels
BF	board feet
BHP	brake horsepower
BLS	black liquor solids
BPSD	barrels per stream day
BTU	British thermal units
CF	cubic feet
CFM	cubic feet per minute
CUYD	cubic yard
D	day
DFEED	dry feed
DACF	dry actual cubic feet
DIST	distillate
DSCF	dry standard cubic feet
F	feet
G	gram
G/B-HP-H	grams per brake horsepower-hour
G/HP-H	grams per horsepower-hour
G/O	gas/oil
GAL	gallon
GAL/M	gallons per minute
GIGA	giga- *(10^9 prefix)*
GR	grains
H	hour
HP	horsepower
J	joule
KG	kilogram
KW	kilowatt
L	liter
LB	pound
LT	long ton

Abbreviation	Emission Limit Unit
M	thousand (10^3)
MI	miles
MIN	minute
MG/L	milligram per liter
MM	million (10^6)
MO	month
MW	megawatt
UG	microgram (10^{-6})
N	natural
NG	nanogram (10^{-9})
OPAC	opacity
PPM	parts per million
PPH	parts per hundred
%	percent
% BY VOL	% by volume
% BY WT	% by weight
RDF	refuse derived fuel
RESID	residual
SB	subbituminous
SCF	standard cubic feet
SCFD	standard cubic feet per day
SCFH	standard cubic feet per hour
SCFM	standard cubic feet per minute
SEC	second
SQF	square feet
T	ton
T/D	tons per day
T/H	tons per hour
T/YR	tons per year
TONNE	metric tonne
VOL	volume
WKS	weeks
YD	yard
YR	year

Abbreviations for Pollutants

Abbreviation	Pollutant
AG	silver
AN	acrylonitrile
AR	argon
AS	arsenic
BA	barium
BAP	benzo(a)pyrene
BE	beryllium
CA	calcium
CD	cadmium
CDD	chlorodibenzodioxins
CDF	chlorodibenzofurans
CL	chlorine
CL2	chlorine (gas)
CL2/OCL	chlorine and oxychlorine
CLO2	chlorine dioxide
CO	carbon monoxide
CO2	carbon dioxide
COS	carbonyl sulfide
CR	chromium
CRVI	hexavalent chrome
CS	cesium
CU	copper
DCB	1,4-dichloro-2-butene
ETH	ethylene
ETO	ethylene oxide
F	fluorine
TF	fluorides, total
FSP	fine suspended particulates
HBR	hydrogen bromide
HC	hydrocarbons
HCL	hydrochloric acid
HCN	hydrogen cyanide
HDM	hexamethylene diisocyanate monomer
HF	hydrogen fluoride
HG	mercury
HHD	homopolymer of HDM (see above)
H2O	water
H2S	hydrogen sulfide
H2SO4	sulfuric acid
H2SO4 mist	sulfuric acid mist (also referred to as SAM)
MA	maleic anhydride

Abbreviation	Pollutant
MC ACETATE	methyl cellusolve acetate
MEK	methyl ethyl ketone
MG	magnesium
MI KETONE	methyl isobutyl ketone
MMH	methyl hydrazine
MN	manganese
MO	molybdenum
NAOH	sodium hydroxide
NA2SO4	salt cake
NH3	ammonia
NH4	ammonium
NH4CL	ammonium chloride
NI	nickel
NMHC	nonmethane hydrocarbons
NMOC	nonmethane organic carbon
NOX	nitrogen oxide
NO2	nitrogen dioxide
N2O	nitrous oxide
PAH	polynuclear aromatic hydrocarbons
PB	lead
PCB	polychlorinated biphenyls
PCDF	polychlorinated dibenzo furans
PCNB	pentochloronitrobenzene herbicide
PM, PM10	particulate matter
POCL3	phosphorous oxychloride
POHC	principle organic hazardous constituents
RHC	reactive hydrocarbons
ROC	reactive organic compounds
ROG	reactive organic gases
RSC	reduced sulfur compounds
S	sulfur
SB	antimony
SE	selenium
SN	tin
SO2	sulfur dioxide
SO3	sulfur trioxide
TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin
TCDF	tetrachlorodibenzo furan
TCE	trichloroethylene
TC-ETHANE	1,1,1-trichloroethane
TF	Total Fluorides
TICL4	titanium tetrachloride
TMT	tetramethyl tin

Abbreviation	Pollutant
TRS	total reduced sulfur
U	uranium
UF4	uranium tetrafluoride
V	vanadium
VC	vinyl chloride
VCM	vinyl chloride monomer
VE	visible emissions
VOC	volatile organic compounds
ZN	zinc
ZRSO4	zirconium sulfate

Pollutant Name and CAS Number

See also the previous table, Abbreviations for Pollutants

POLLUTANT	ALTERNATE NAME	CAS NUMBER
1,1,1 TRICHLOROETHANE		71-55-6
2,3,7,8 TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
2-BUTANONE		78-93-3
ACETONE		67-64-1
ACRYLAMIDE		79-06-1
ACRYLAMIDE MONOMER		79-06-1
ACRYLIC ACID		79-10-7
ACRYLONITRILE		107-13-1
AG	Silver	7440-22-4
ALUMINUM OXIDE		1344-28-1
AMMONIA		7664-41-7
AN	Acrylonitrile	107-13-1
AR	Argon	13994-71-3
ARGON		13994-71-3
AS	Arsenic	7440-38-2
ASBESTOS		1332-21-4
BA	Barium	7440-39-3
BAP	Benzo(a)pyrene	50-32-8
BE	Beryllium	7440-41-7
BENZENE		71-43-2
BENZO-A-PYRENE		50-32-8
BENZOTRICHLORIDE		98-07-7
BENZYL CHLORIDE		100-44-7
BR	Bromine	7726-95-6
BUTYL ACETATE		123-86-4
BZ	Benzene	71-43-2
CA	Calcium	7440-70-2
CALCIUM HYDROXIDE		1035-62-0
CAPROLACTAM		105-60-2
CARBON BLACK		1333-86-4
CARBON TETRACHLORIDE		56-23-5
CCL2F2	Dichlorodifluoromethane	75-71-8
CD	Cadmium	7440-43-9
CHCL3	Chloroform	67-66-3
CHLORINE		7782-50-5
CHLORINE DIOXIDE		10049-04-4
CHLOROFORM		67-66-3
CHROME	Chromium	7440-47-3
CHROMIC ACID		1333-82-0

CL	Chlorine	7782-50-5
CL2	Chlorine (gas)	10049-04-4
CO	Carbon Monoxide	630-08-0
CO2	Carbon Dioxide	124-38-9
COBALT		7440-48-4
CR	Chromium	7440-47-3
CRO3	Chromium Trioxide	1333-82-0
CS	Cesium	7440-46-2
CU	Copper	7440-50-8
DCB	1,4-dichloro-2-butene	764-41-0
DCB		25321-22-6
DIBUTYL PHTHALATE		84-72-2
DIISOBUTYL KETONE		108-83-8
DIMETHYL ACETAMIDE		127-19-5
DIMETHYL FORMAMIDE		68-12-2
DIOXINS		SEQ. 128
ETHYL ACETATE		141-78-6
ETHYL ALCOHOL		64-17-5
ETHYL BENZENE		100-41-4
ETHYLBENZENE		100-41-4
ETHYLENE GLYCOL		107-21-1
ETHYLENE OXIDE		75-21-8
ETO	Ethylene Oxide	75-21-8
F	Fluorine	7782-41-4
FLUORIDE		16984-48-8
FLUORIDES		16984-48-8
FORMALDEHYDE		50-00-0
FREON 12		75-71-8
GRAPHITE		7782-42-5
H2O	Water	7732-18-5
H2S	Hydrogen Sulfide	7783-06-4
H2SO4	Sulfuric Acid	7664-93-9
H2SO4 MIST		7664-93-9
H2SO4 VAPORS		7664-93-9
HBR	Hydrogen Bromide	10035-10-6
HC		SEQ. 11
HCL	Hydrochloric Acid	7647-01-0
HCN	Hydrogen Cyanide	7490-8
HEPTANE		142-82-5
HF	Hydrogen Fluoride	7664-39-3
HG	Mercury	7439-97-6
HYDRAZINE		302-01-2
HYDROGEN PEROXIDE		7722-84-1
ISOOCTYL ALCOHOL		52738-99-5

ISOPROPYL ACETATE		94-11-1
ISOPROPYL ALCOHOL		67-63-0
MAGNESIUM		7439-95-4
MALEIC ANHYDRIDE		108-31-6
MEK	Methyl Ethyl Ketone	78-93-3
MEK-PEROXIDE	Methyl Ethyl Ketone Peroxide	1338-23-4
METHACRYLIC ACID		79-41-4
METHANE		74-82-8
METHANOL		67-56-1
METHYL AMYL KETONE		110-43-0
METHYL BROMIDE		74-83-9
METHYL ETHYL KETONE		78-93-3
METHYL ISOBUTYL KETONE		108-10-1
METHYLENE CHORIDE		75-09-2
MG	Magnesium	7439-95-4
MINERAL SPIRITS		64475-85-0
MMH	Methyl Hydrazine	60-34-4
MN	Manganese	7439-96-5
MO	Molybdenum	7439-98-7
N-BUTYL ACETATE		123-86-4
N-BUTYL ALCOHOL		71-36-3
N-PROPYL ACETATE		109-60-4
N2O	Nitrous Oxide	10024-97-2
NAOH	Sodium Hydroxide	1310-73-2
NAPHTHALENE		91-20-3
NH3	Ammonia	7664-41-7
NH4	Ammonium	14798-03-9
NH4CL	Ammonium Chloride	12125-02-5
NI	Nickel	7440-02-0
NICKEL		7440-02-0
NITRIC ACID		7697-37-2
NO2	Nitrogen Dioxide	10102-44-0
P-TOLUIDINE		106-49-0
PAH	Polynuclear Aromatic Hydrocarbons	SEQ. 6
PB	Lead	7439-92-1
PCB	Polychlorinated Biphenyls	1336-36-3
PERCHLOROETHYLENE		127-18-4
PHENOL		108-95-2
PHOSPHORIC ACID		7664-38-2
PHOSPHOROUS		7723-14-0
POCL3	Phosphorous Oxychloride	10025-87-3
POTASSIUM HYDROXIDE		1310-58-3
PROPYLENE OXIDE		75-56-9
S	Sulfur	7704-34-9

SB	Antimony	7440-36-0
SE	Selenium	7782-49-2
SILVER		7440-22-4
SN	Tin	7440-31-5
SO2	Sulfur Dioxide	7446-09-5
SO3	Sulfur Trioxide	7446-11-9
SODIUM BICHROMATE		10588-01-9
STRONTIUM CHROMATE		7789-06-2
STYRENE		100-42-5
SULFATES		14808-79-8
SULFURIC ACID		7664-93-9
SULFURIC ACID MIST		7664-93-9
TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
TICL4	Titanium Tetrachloride	7550-45-0
TITANIUM DIOXIDE		13463-67-7
TL	Thallium	7440-28-0
TOLUENE		108-88-3
TRICHLOROETHYLENE		79-01-6
TRIETHYLAMINE		121-44-8
U	Uranium	7440-61-1
UF4	Uranium Tetrafluoride	10049-14-6
URANIUM		7440-61-1
V	Vanadium	7440-62-2
XYLENE		1330-20-7
XYLENES		1330-20-7
ZINC		7440-66-6
ZINC CHROMATE		13530-65-9
ZN	Zinc	7440-66-6

Basis for Limit

BACT-PSD	Prevention of Significant Deterioration
BACT-Other	Other (i.e., T-BACT, Toxics-BACT, etc)
LAER	Lowest Available Control Technology
MACT	Maximum Achievable Control Technology
RACT	Reasonably Available Control Technology
GACT	Generally Available Control Technology
NSPS	New Source Performance Standards
NESHAPS	National Emission Standards for Hazardous Air Pollutants
OTHER	Other Control Technology Standards

Emission Type

Point, Fugitive, or Area Source

APPENDIX E
RBLC STANDARD EMISSION UNITS BY PROCESS TYPE CODE

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Appendix E --RBLC Standard Emission Units by Process Type Code

Attached is a list of required emission units to be used when submitting standardized emission limit information to the RBLC. In general, the emission units of processes not listed here should be in units related to the production output. Standardization of emission units will facilitate ranking of emission control requirements on a pollutant specific basis.

Clearinghouse Process Code	**/ Name or Description**	**Pollutant**	**Required Emission Units**
ALL	All Processes with Emission Limits for Opacity or Visible Emissions	Visible Emissions	% Opacity
11.001 - 11.999	Electric Utility Steam Generators, Fossil Fuel-fired Steam Generators, Boilers, Furnaces, and Process Heaters	PM, PM10, PM2.5, VOC, SOx, NOx, CO, Pb	LB/MMBTU (see Note #1)
15.001 - 15.999	I. C. Engines	NOx, SOx, CO, VOC	G/B-HP-H G/BHP-H (see Note #1)
	Stationary Gas Turbines	NOx, SOx, CO, VOC	PPM @ 15% O_2 (see Note #1)
21.001	Municipal Waste Incinerators	Particulate	LB/MMBTU (or GR/DSCF)
		Metals (CD, PB, HG) and dioxins/furans	GR/DSCF @ 12%CO_2
		Gas (SO2, HCL, CO, NOx)	PPM @ 12%CO_2 (see Note #1)
21.004	Sewage Sludge Incineration	Particulate	LB/T of dry sludge input
30.002	Kraft Pulp Mills - All Sources	HAP	KG/MG
		TRS	PPM (see Note #1)
30.002	Kraft Pulp Mills - Recovery Furnace	Particulate	GR/DSCM @ 8% O_2 (see Note #1)
	Kraft Pulp Mills - Lime Kiln	Particulate	GR/DSCM @ 10% O_2 (see Note #1)
	Kraft Pulp Mills - Smelt Dissolving Tanks	Particulate	LB/T BLS (see Note #1)

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
	Kraft Pulp Mills - Digesters, Brown Stock Washers, Evaporators, Oxidation, Stripping System	TRS	PPM (by volume) corr to 10% O_2
41.002	Auto & Light Truck Surface Coating	VOC	LB/GAL applied coating solids
41.004	Can Surface Coating	VOC	LB/GAL applied coating solids
41.007	Flexible Vinyl & Urethane Coating and Printing	VOC	LB/LB ink solids
41.008	Large Appliance Surface Coating	VOC	LB/GAL of applied coating solids
41.011	Metal Coil Surface Coating	VOC	LB/GAL applied coating solids
41.012	Metal Furniture Surface Coating	VOC	LB/GAL applied coating solids
41.015	Plastic Parts for Business Machines Surface Coating	VOC	LB/GAL applied coating solids
41.018	Pressure Sensitive Tape & Label Surface Coating	VOC	LB/LB applied coating solids
41.019 - 41.023	Printing	VOC	% of total mass of VOC solvents & H_2O used
50.003	Petroleum Refining - Cracking	Particulate SOx CO	LB/1000 LB % by volume
50.006	Petroleum Refining - Claus Sulfur Recovery Units	SOx, TRS, H_2S	% by volume
50.999	Petroleum Refining - Flue Gas	SOx	GR/DSCF (H_2S)
61.009	Phosphate Fertilizers Pdtn.	Total Fluoride	LB/T (see Note #1)
62.001	Ammonium Sulfate Pdtn.	Particulate	LB/T ammonium sulfate pdtn.
62.014	Nitric Acid Plants	NOX	LB/T (see Note #1)
62.015	Sulfuric Acid Plants	SO_2 & Acid Mist	LB/T (see Note #1)
65.001 - 65.999	Synthetic Fibers Production	VOC	LB/1000 LB solvent feed

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
70.007	Grain Elevators	Particulate	GR/DSCF (see Note #1)
81.003	Ferroalloy Production	Particulate CO	LB/MW-H 20% (volume basis)
81.004	Iron Foundries	Particulate	GR/DSCF
81.006 or 81.005/81.007?	Steel Plants - Electric Arc	Particulate	GR/DSCF (see Note #1)
82.001	Lead Acid Battery Mfg.	Pb (Lead)	GR/DSCF or LB/T lead feed
82.005	Primary Aluminum Pdtn.	Total Fluorides	LB/T
82.006	Primary Copper Smelters	Particulate	GR/DSCF (see Note #1)
82.007	Primary Lead Smelting	Particulate	GR/DSCF (see Note #1)
82.009	Primary Zinc Smelting	Particulate	GR/DSCF (see Note #1)
82.011	Sec. Brass & Brass Ingot Pdtn.	Particulate	GR/DSCF (see Note #1)
82.013	Secondary Lead Smelting	Particulate	GR/DSCF (see Note #1)
90.004	Hot-Mix Asphalt Processing	Particulate	GR/DSCF
90.011	Coal Hand./Proc./Prep./Cleaning	Particulate	GR/DSCF (see Note #1)
90.016	Glass Mfg. Furnace	Particulate	LB/T (see Note #1)
90.019	Lime/Limestone Handling/Kilns/Storage/Mfg.	Particulate	LB/T
90.021	Metallic Mineral/Ore Processing	Particulate	GR/DSCF
90.024	Non-metallic Mineral Processing	Particulate	GR/DSCF
90.026	Phosphate Rock Processing		LB/T
90.028	Portland Cement Plants - kiln, in-line raw mil and kiln, clinker cooler	Particulate	LB/T (see Note #1)
90.033	Wool Fiberglass Mfg.	Particulate	LB/T glass pulled
90.034	Asphalt Roofing Products Mfg.	Particulate	LB/1000 LB

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
99.015	Rubber Tire Mfg. Industry - Bead Cementing Operation	VOC	G/Bead/MO
	Rubber Tire Mfg. Industry - Tread End Cementing Operation, Inside Green Tire Spraying (Water Based), Outside Green Tire Spraying (Water Based)	VOC	G/Tire/MO
	Rubber Tire Mfg. Industry - All Other Sources	VOC	% Reduction

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Note #1:

Standard emission units have been established for these processes. These units are required for reporting standardized emission limits in the RBLC data base for these processes.

For all processes, percent % has been established as the unit for reporting standardized emission limits for opacity and visible emissions (VE).

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(Please read Instructions on the reverse before completing.)

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The Clean Air Act as amended in 1977 prescribes several technology-based limitations affecting new or modified air pollution sources: 1) new source performance standards (NSPS), 2) best available control technology (BACT), and 3) lowest achievable emission rate (LAER).

The basic purposes of the RACT/BACT/LAER Clearinghouse are 1) to provide State and local air pollution control agencies with current information on case-by-case control technology determinations that are made nationwide and 2) promote communication, cooperation, and sharing of control technology information among the permitting agencies. This document details how the RBLC site on the World Wide Web is organized and operates. It includes information on how to do a data base query, generate a custom report, and enter/edit information into the RBLC (if authorized).

The RBLC has now moved to the Web. The RBLC Web address is:

http://www.epa.gov/ttn/catc/

Clicking on the RBLC logo on this page allows access to all of the information in the RBLC including interactive queries, customized reports, and downloadable copies of this and other RBLC documents.

Volume 2 includes information for authorized persons in State and local air permitting agencies who are inputting information directly into the RBLC.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field Group
Best Available Control Technology Lowest Achievable Emission Rate Control Technology Center New Source Review Reasonable Achievable Control Technology	Air Pollution Control	

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